

CUSTOMER NO.: 24498
Serial No.: 10/563,711
Office Action dated: 12/23/08
Response dated: 03/19/09

PATENT
PU030197

REMARKS

Applicants have carefully reviewed the Office Action mailed December 28, 2008. To better point out and claim their invention, applicants have amended claims 1 and 6. Claims 1-10 remain pending in this application.

35 U.S.C. §101 Rejection of Claims 1-6

Claims 1-6 stand rejected under 35 U.S.C. §101 as not falling within one of the four statutory categories. As announced by the Court of Appeals for the Federal Circuit in the recently decided case *In Re Bilski*, 545 F. 3d 943, 953 (Fed Cir. 2008), the appropriate test for determining compliance with 35 U.S.C. §101 is the “machine or transformation” test as elucidated by the U.S. Supreme Court in *Benson*, 409 U.S. 70. In particular, to be eligible for a patent under 35 U.S.C. §101, a process must be tied to a particular machine or transform a particular article to a different state or thing.

As now amended claim 1, and claims 2-6 satisfy the machine prong of the machine or transformation test as set forth in *Bilsky* because the claims now recite a machine which performs recited process. On this basis, applicants' claims 1-13, as written fully comply with 35 U.S.C. §101. Applicants respectfully request withdrawal of that rejection.

35 U.S.C. 102(b) Rejection of Claims 1-4, 6 and 7

Claims 1-4, 6 and 7 stand rejected under 35 U.S.C. §102(b) as being anticipated by EPA 0 614 312 to Lu et al. Applicants respectfully disagree with the Examiner's interpretation of Lu et al. Although Lu et al. concerns noise reduction during the video encoding process, Lu et al. achieves such reduction in a substantially different manner that not only doesn't anticipate the claimed invention, but arguably teaches away from it.

By way of example, Figure 1 of Lu et al. shows an MPEG encoder 102 and a noise reduction system 100 which receives an input video stream, and provides outputs to a motion estimator and summing amplifier within the MPEG encoder 102. Thus, based on this physical configuration alone, it is impossible for the noise reduction system 100 to “create for each macroblock, a noise reduced macroblock

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using the N sets of motion estimation data." In fact, Lu et al. clearly teaches that the input signal to the noise system comprises the current frame (k) and two sets of L neighboring frames. Although Lu et al. does disclose the concept of motion estimation (as is required by the MPEG encoder), it is clear from the disclosure and the figures that such motion estimation is not used as an input to the noise reducer, and therefore the noise reduction system 100 cannot create, for each macroblock, a noise reduced macroblock using the N sets of motion estimation data. Not only does Lu et al. not anticipate the applicants' claimed invention, but actually teaches away from it same by showing and describing the noise reduction system as receiving the input video signal before motion estimation by the MPEG encoder.

In rejecting applicants' claim 1, the Examiner cites page 3, lines 2-9 where Lu et al. describes the use of motion and trajectory vectors in an effort to show applicants' creating step. As described in Lu et al., the noise reduction system 100 generates motion vectors (MV and CMV) for input to the motion estimator of the MPEG encoder. However, this aspect of Lu et al. does not create a noise reduced macroblock using N sets of motion estimation data, as set forth by applicants' claimed invention. In fact, the block based motion estimator 20 within the noise reduction system 100 of Lu et al. operates to select one trial vector which produces the smallest trimmed square error as the estimated trajectory vector.

Thus, Lu et al. fails to disclose or remotely suggest the concept of "creating, for each macroblock, a noise reduced macroblock *using the N sets of motion estimation data.*" In addition, applicants note that Lu et al. further fails to disclose or suggest estimating motion for each macroblock in an input video signal to yield N sets of motion estimation decision sets, *each set including a reference picture index* and a motion vector. The cited portions of Lu et al. relied upon by the examiner to show motion estimation (i.e., Fig. 4 and corresponding description) fail to disclose or remotely suggest N sets of motion estimation decision sets where each set includes a reference picture index.

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35 U.S.C. 103(a) Rejection of Claims 5 and 10

Claims 5 and 10 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Lu et al. in view of de Haan et al. "Memory Integrated noise Reduction IC for Television" IEEE Transactions on Consumer Electronics, Vol. 43, No. 2, May 1996, pp175-181. As mentioned above, Lu et al. fails to disclose or suggest applicants' step of "creating, *for each macroblock*, a noise reduced macroblock *using the N sets of motion estimation data.*" Like Lu et al., the de Hann et al. reference fails to teach this feature of applicants' claim 1. Given that claims 5 and 10 depend from claims 1 and 7, respectively, these claims are allowable for the same reasons as their parent claim.

Conclusion

In view of the foregoing, applicants solicit entry of this amendment and allowance of the claims. If the Examiner cannot take such action, the Examiner should contact the applicants' attorney at (609) 734-6820 to arrange a mutually convenient date and time for a telephonic interview.

No fees are believed due with regard to this Amendment. However, if there is a fee, please charge and fee or credit any overpayment to Deposit Account No. 07-0832.

Respectfully submitted,

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